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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,656	10/31/2003	Karl Peterson	1693.1016	8487

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STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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KACKAR, RAM N

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/697,656

Applicant(s)

PETERSON ET AL.

Examiner

Ram N. Kackar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 and 11-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,9,10 and 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. The informal drawings are submitted by the applicant to help understand the application. It is noted that if applicant believes that a drawing is necessary to understand the invention, a formal drawing in accordance with acceptable standards should be submitted. It is also necessary that no new matter should be introduced by any such drawing.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2 and 3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In this instance beam line gas output being connected to an unused beam line gas device is not understood".

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this instance the control output being a beam line gas output is not

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understood. The description of this term in the specification is vague and does not point to any structure. In claim 3 "beam line gas output being connected to an unused beam line gas device is not understood".

4. Claims 1-3, 9 and 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this instance "parameter output to selectively produce a parameter output" is not understood. It is noted that parameter is a variable or arbitrary constant in a generic sense and in the context of this invention it could mean an item in a recipe, like gas flow, voltage, pressure etc. Parameter is not a physical output on an interface. However a controller could turn on a physical output by evaluating a parameter like a recipe parameter.

Further, it is not understood if the control output is turned on by a recipe parameter since claim 2 says that the control output is connected to a beam line gas output while beam line gas is an unused recipe parameter.

5. Claims 13-18 are also rejected on the basis of insufficient antecedent basis. Claim 13 recites the limitation "the ion gauge controller" in line 9. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**7. Claims 1-3, 9-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al (US 5111042) in view of Bruce et al (US 6589351) and further in view of Granville-Phillips vacuum gauge controller manual.**

Sullivan et al disclose generator of ionized beam (Abstract) and disclose two ion gauges (pressure sensor) (Fig 15 159 and 163) in the system. One ion gauge is on the vacuum pump side of the isolation valve 162 and the other is on the opposite side.

Sullivan et al do not disclose an ion gauge controller to turn on/off the ion gauges.

Bruce et al disclose that the two ion gauges could easily be controlled by one ion gauge controller by switching them by using remote control inputs (Col 12 lines 47-55 and Fig 6).

Therefore switching ion gauges in order to use only one controller would have been obvious to one of ordinary skill in the art at the time of invention.

Sullivan et al in view of Bruce et al do not disclose delay circuits for application of control signals while switching in order to control the ion gauges.

Granville-Phillips vacuum gauge controller manual teaches (Section 1.3.5) the requirement of a delay in a switching protocol.

Therefore having a delay between switching off one gauge and switching on other would be required and therefore its provision would have been obvious to one of ordinary skill in the art at the time of invention.

Regarding claims 2 and 3, the claims are vague. However it appears that these are the low voltage control signals going to the interface controller for remotely controlling ion gauge

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controllers. This feature is however disclosed by the Granville-Phillips vacuum gauge controller manual.

Claim 9 is a functional limitation directed to an intended use.

**8. Claims 1-3, 9-10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants admitted prior art (AAPA) in view of Sullivan et al (US 5111042) and Bruce et al (US 6589351) and further in view of Granville-Phillips vacuum gauge controller manual.**

AAPA discloses an ion implanter with Faraday disk as in Axcelis GSD to measure beam of impurity ions to be implanted with a base unit for control interfaces.

AAPA does not disclose the use of dual ion gauges controlled by one ion gauge controller.

Sullivan et al disclose generator of ionized beam (Abstract) and disclose two ion gauges (Fig 15 159 and 163) in the system. One ion gauge is on the vacuum pump side of the isolation valve 162 and the other is on the opposite side.

Sullivan et al do not disclose an ion gauge controller to turn on/off the ion gauges.

Bruce et al disclose that the two ion gauges could easily be controlled by one ion gauge controller by switching them by using remote control inputs (Col 12 lines 47-55 and Fig 6).

Therefore switching ion gauges in order to use only one controller would have been obvious to one of ordinary skill in the art at the time of invention.

Sullivan et al in view of Bruce et al do not disclose delay circuits for application of control signals while switching in order to control the ion gauges.

Granville-Phillips vacuum gauge controller manual teaches (Section 1.3.5) the requirement of a delay in a switching protocol.

Therefore having a delay between switching off one gauge and switching on other would be required and therefore its provision would have been obvious to one of ordinary skill in the art at the time of invention.

### ***Response to Arguments***

Applicant's arguments filed 9/21/2006 have been fully considered but they are not persuasive.

Applicant's arguments regarding rejection based on 35 U.S.C. 112 are noted and some rejections are removed. However, rejections as above stay, in view of inadequate corrective action and introduction of new limitations.

Regarding the drawing, it is noted that if the applicant believes that a drawing is needed for explaining the invention it should be submitted according to rules. The drawing of remarks though, appears to be new matter.

Applicant argues that Bruce does not disclose an ion gauge controller or the remote control inputs. In response it is stated that Bruce suggests switching of ion gauges. It is known that ion gauges need ion gauge controllers and switching ion gauges is done through ion gauge controllers.

Applicant further argues that the Examiner has difficult time understanding the invention. It appears that the drawing in the remarks is added to explain the invention better. However, applicant has not provided in the specification where this explanation is clearly disclosed.

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Further the claim does not recite what the applicant is trying to say through the drawing.

Applicant argues that the GP Manual does not disclose a delay circuit. In response it is noted that the claim does not require a delay circuit.

Regarding claim 10, all the limitations are disclosed by the cited prior art.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram N. Kackar whose telephone number is 571 272 1436. The examiner can normally be reached on M-F 8:00 A.M to 5:P.M.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571 272 1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ram Kackar

Primary Examiner AU 1763